

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

an internal voltage supply circuit for generating an internal voltage from a power supply voltage;

5 an internal circuit which is operated by the internal voltage;

a switching transistor for receiving at a gate an operation signal output from the internal circuit; and

a load circuit which is connected to a drain of the switching transistor and consumes the same amount of electric current as the amount of electric current which the internal circuit consumes during an operation period,

wherein by the operation signal, the switch transistor is turned OFF when the internal circuit is in an operation state and is turned ON when the internal circuit is in a non-operation state.

15 2. The semiconductor device of claim 1, wherein the load circuit includes a first resistor.

3. The semiconductor device of claim 2, wherein the amount of electric current which the first resistor consumes is substantially the same as the amount of electric current which the internal circuit consumes during an operation period.

4. The semiconductor device of claim 2, wherein the load circuit includes a load adjustment section connected in series to the first resistor.

25 5. The semiconductor device of claim 4, wherein the amount of electric current

which the first resistor and the load adjustment section consume is the substantially the same as the amount of electric current which the internal circuit consumes during an operation period.

5 6. The semiconductor device of claim 5, wherein the load adjustment section includes a second resistor and a fuse device connected in parallel to each other.

7. The semiconductor device of claim 5, wherein the load adjustment section includes a second resistor and a transistor connected in parallel to each other.

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8. The semiconductor device of claim 7, further comprising a latch circuit connected to the transistor.

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9. The semiconductor device of claim 1, wherein the switch transistor is an n-channel transistor.

10. The semiconductor device of claim 9, wherein the switching transistor has a source grounded and a drain connected to the internal voltage supply circuit via the load circuit.

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11. The semiconductor device of claim 1, wherein the switch transistor is a p-channel transistor.

12. The semiconductor device of claim 11, wherein the switch transistor has a
25 source connected to the internal voltage supply circuit and a drain grounded via the load

circuit.

13. An IC card comprising:

a semiconductor device which includes an internal voltage supply circuit for
5 generating an internal voltage from a power supply voltage, an internal circuit which is
operated by the internal voltage, a switching transistor for receiving at a gate an operation
signal output from the internal circuit, and a load circuit which is connected to a drain of
the switching transistor and consumes the same amount of electric current as the amount of
electric current which the internal circuit consumes during an operation period and in
10 which by the operation signal, the switch transistor is turned OFF when the internal circuit
is in an operation state and is turned ON when the internal circuit is in a non-operation
state.